

MOUNTAINS TO THE SEA: ECOSYSTEMS OF CHILE

CRN: Undergraduate: FOR 499; Graduate: FOR 599 Special Topics in Forestry

Credits: 3

Offered: March 2019

Course Instructors:

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Oregon State University; Forest Engineering, Resources and Management

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Universidad Austral de Chile; Facultad de Ciencias Forestales y Recursos Naturales

Course Description

This course explores the complex ecological, climatic, and management dimensions of forest management, conservation and restoration through an immersive experience in Chile. Over a period of one week, students will be part of an intensive investigation of forest ecology and management in a wide range of Chilean forest ecosystems. This will include natural Chilean forests and managed forest plantations in a range of settings from the coast to the Andes foothills. Student will interact extensively with Chilean students and also Chilean faculty who are working on various aspects of forest ecology, resource conservation, research, and management.

Students will be exposed to multiple perspectives, requiring them to listen and observe carefully, think critically, and reflect deeply on the complex web of issues facing Chilean forest managers and conservationists. Through this immersive learning experience, students will be able to critically analyze forest conservation, restoration, and management challenges in their own home countries.

Tentative Itinerary

The course will be conducted primarily in three locations: 1) KodKod and El Cañi, Nature Sanctuary, close to Pucon; 2) the field station at San Pablo de Tregua owned and managed by Universidad Austral de Chile (UACH); and 3) Valdivia, city home of UACH main campus.

Oregon State University students will work and learn alongside students from Universidad Austral de Chile for part of the week. Activities will include forest tours, field ecology measurements and analyses, assistance with the research of Chilean researchers, and group presentations.

After the long trip to Temuco, students will receive a welcome dinner and lodge at KodKod. Next day we will travel to Volcan Lanin, visiting *Araucaria araucana* (monkey puzzle tree) forests close to the frontier with Argentina. We will have an overview of Chilean native forests ecology. On Monday we will stay at the conference room at “El Cañi”, where Chilean faculty from Universidad Catolica will lead activities related to native forest management and social aspects with native communities. Next day we will visit leisure activities, including rafting, zip lines, hot springs or horse riding at “Turismo Trancura”, a tourism complex located near KodKod site. After lunch we will travel to “San Pablo de Tregua” (UACH Research Station) for an intensive 2 days of focused research into forest ecology and management. This field station is in low-elevation mountains near the Andean foothills and harbors mostly primary forest, in a diverse landscape including forest plantations planted with exotic species (including Douglas-fir), small-scale agriculture, and other development. After two days in San Pablo, we will travel to “Las Palmas”, a UACH Research Station near Valdivia, where we will have activities related to forests plantations management and soil ecology.

Table 1. Schedule of daily activities.

Day		Place	Activity	
0	Fri	22	Portland - Temuco	Depart PDX (or other airport if e-campus) Arrive at Temuco Airport by 2pm.
1	Sat	23	Temuco - KodKod	Lunch on own. Travel as a group to KodKod . Welcome Dinner. <i>Overnight in KodKod.</i>
2	Sun	24	KodKod - Volcan Lanin - Pucon	Volcan Lanin (trekking at volcano foot, visit Araucaria Forests, lagoon). Mapuche Lunch. Travel to Pucon. Dinner on own in Pucon. <i>Overnight in KodKod.</i>
3	Mon	25	KodKod	Activities with PUC Faculty <ul style="list-style-type: none"> • Field assessments of Andean temperate forests attributes (composition, structure and function) in an altitudinal gradient. • Sampling techniques for birds and trees in Araucaria forests ecosystems. <i>Overnight in KodKod.</i>
4	Tue	26	KodKod - Trancura - Panguipulli - San Pablo	Morning: Activities at Turismo Trancura . Lunch at Trancura. After lunch: Travel to San Pablo. <i>Overnight in San Pablo.</i>
5	Wed	27	San Pablo	Trekking to Coihue "El Presidente". Field lunch. Field activity with UAC faculty: Forest Ecology quarters method, quantifying biodiversity and stand structure. Evening: Chilean BBQ. <i>Overnight in San Pablo.</i>
6	Thu	28	San Pablo - Valdivia	Travel to "Las Palmas" research station near Valdivia (forest plantations). Field lunch. Field activity with UACH faculty: Native and Introduced plantations. Visit Greenhouse of CEFOR (UACH) Afternoon: Arrive to hotel and work on presentations. Dinner on own in Valdivia. <i>Overnight in Valdivia.</i>
7	Fri	29	Valdivia	Visit Campus UACH & Arboretum; Closing Presentations; Lunch at UACH Cafeteria Afternoon: Boat Tour; Program debrief. Farewell Dinner. <i>Overnight in Valdivia.</i>
8	Sat	30	Valdivia - Temuco	Morning: Travel to Temuco Airport. Adjourn. Depart no earlier than 1 pm from Temuco.

Catalogue Description

With the explicit goal of enhancing global learning, this field-based course immerses students in the challenges and opportunities of forest ecology, restoration and conservation, and management in a part of Chile that has many parallels with the Pacific Northwest. Students will learn from hands-on field research about managing and in some cases restoring Chilean forests for a variety of uses, from timber production to wildlife habitat to ecosystem services. The global context of forest management, restoration, and conversion will be emphasized, with the aim of preparing students to critically analyze similar issues throughout the world.

Student Learning Goals/Expected Outcomes

Upon completion of this course, students will be able to:

1. Articulate key concepts of forest ecology as applied to forest management and conservation.
2. Work collaboratively in interdisciplinary teams toward established research, education and outreach goals.
3. Develop and articulate research questions germane to course themes, collect relevant primary and secondary data using appropriate research methods, synthesize research findings and present them through professional oral and written communications.
4. Analyze and articulate interconnections between local conditions and global ecological, social, political, and economic trends affecting forest conservation and management.

Prerequisites

To register for this course, students must:

1. Have achieved at least sophomore standing, and a 2.75 GPA or permission of instructor.
2. Submit a complete application through the OSU GO system, which includes a personal essay, unofficial transcript and recommendation.

Student Learning Assessment

Each student will prepare a course portfolio documenting their learning experience and outcomes. Portfolios will include a combination of the following:

1. Personal learning objectives and self-assessment of learning
2. Field notes, writing assignments, journals
3. Class critiques of student presentations
4. Graded final projects, which will consist of videos, podcasts, or on-campus presentations that summarize what was learned and student experiences
5. Student and faculty assessment of student participation in and contribution to class activities

Evaluation of student performance: Grading A-F. Students will be assessed on students participation in preparatory field trip in Oregon (10%), activities in Chile (30%), closing presentations in Chile (20%) and final project presentation at OSU (40%).

Learning resources: there will be no textbook for this course; relevant readings and other materials (e.g., popular media, news articles, videos) will be provided in a Box folder.

Statement Regarding Students with Disabilities: Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 541-737-4098.

Expectations for Student Conduct: All students will be expected to follow the *student conduct and community standards* of Oregon State University (<http://studentlife.oregonstate.edu/studentconduct/offenses-0>). Cheating or plagiarism by students is subject to the disciplinary process outlined in the Student Conduct

Regulations. Students are expected to be honest and ethical in their academic work.

Academic dishonesty is defined as an intentional act of deception in one of the following areas:

- **CHEATING** - use or attempted use of unauthorized materials, information or study aids or an act of deceit by which a student attempts to misrepresent mastery of academic effort or information. This includes unauthorized copying or collaboration on a test or assignment or using prohibited materials and texts.
- **FABRICATION** - falsification or invention of any information (including falsifying research, inventing or exaggerating data and listing incorrect or fictitious references.
- **ASSISTING** - helping another commit an act of academic dishonesty. This includes paying or bribing someone to acquire a test or assignment, changing someone's grades or academic records, or taking a test/doing an assignment for someone else (or allowing someone to do these things for you). It is a violation of Oregon state law to create and offer to sell part or all of an education assignment to another person (ORS 165.114).
- **TAMPERING** - altering or interfering with evaluation instruments and documents.
- **PLAGIARISM** - representing the word or ideas of another person as one's own OR presenting someone else's words, ideas, artistry or data as one's own. This includes copying another person's work (including unpublished material) without appropriate referencing, presenting someone else's opinions and theories as one's own, or working jointly on a project, then submitting it as one's own.

Behaviors disruptive to the learning environment will not be tolerated and will be referred to the Office of Student Conduct for disciplinary action.